

MINI SERVER ENVIRONMENT MONITORING SYSTEM

SNMP and Web monitoring/management of server room environments



ENVIROMUX-MINI with ENVIROMUX-T-3 Temperature Sensor

Monitors Threats:

- **Temperature**
- **Humidity**
- **Water Leakage**
- **Intrusion**

Features & Applications

The ENVIROMUX® Mini Server Environment Monitoring System monitors critical environmental conditions (such as temperature, humidity, and water leakage) that could destroy network components in your server room. When a sensor goes out of range of a configurable threshold, the system will notify you via email, SNMP traps, web-page alerts, a visual indicator (red LED), and SMS messages (via external GSM or 3G modem).

- Monitor and manage server room environmental conditions over IP.
- Sensors supported:
 - 2 temperature/humidity sensors
 - 1 liquid detection sensor
 - 4 digital inputs sensitive to contact closure
- Alerts are posted in message log, which is accessible through Web user interface.
 - The log can be downloaded as a tab-delimited plain text file.
- Flexible Zero-RU mounting.
 - Mounting tabs included.
 - Optional DIN mounting available.
- Integrates with various Open Source monitoring packages — Nagios and MRTG.
- Optional industrial mini server environment monitoring system for high temperature environments. This industrial system has the ability to operate and monitor in harsh environments at high temperatures up to 167°F (75°C).
 - Add "-IND" to the end of the part number to specify this option.
- Use in data centers, co-lo sites, web hosting facilities, telecom switching sites, POP sites, server closets, or any unmanned area that needs to be monitored.

Specifications

Temperature/Humidity Inputs

- Two female RJ45 connectors for connecting temperature sensors, humidity sensors and/or combined temperature/humidity sensors.

Water Detection Cable Input

- One screw terminal pair for connecting liquid detection sensor.
 - Additional water detection sensors can be connected to the dry contact closures.
- Output voltage: +5VDC.
- Current limited to 10mA
- Maximum resistance to close contact: 300K Ohm.

Dry Contact Closures

- Four screw terminal pairs for connecting dry contact devices.
- Potential-free.
- Output voltage: +5VDC
- Current limited to 10mA
- Maximum resistance to close contact: 300K Ohm

RS232 Port

- One female RJ45 connector for controlling a GSM modem.
- Supports 3-wire interface (Tx, Rx and GND)
- Used for flash upgrades (includes DB9F-RJ45F adapter).
- GSM modem supported: Teltonika WirelessCom/G10.
- 3G modem supported: NetComm N3GS003

MTBF

- 80,327 hrs.

Ethernet Port

- One female RJ45 connector with LEDs.
- 10 BaseT Ethernet interface.

Protocols

- HTTP, SNMP V1, SMTP, TCP/IP, UDP, DHCP
- Compatible with any SNMP management software.
- Operates and configures via HTTP web page.
 - Supports Microsoft Internet Explorer 6.0 and higher.
- An IP address can be assigned to the ENVIROMUX-MINI automatically by a DHCP server.
- Generates SNMP traps, email alerts, and syslog messages.
- Email alerts can be sent to three addresses.
- Up to four users can access the Web interface simultaneously.

Dimensions

- WxDxH (in.): 5.6x2x2

Regulatory Approvals

- ENVIROMUX-MINI: CE, UL, cUL, RoHS
- ENVIROMUX-MINI-IND: CE, UL, cUL, RoHS

Power

- 110 or 220 VAC at 50 or 60 Hz via AC adapter.
- Power consumption: 5W
- Use the PWR-48V-5V1A DC-DC power converter to install the ENVIROMUX-MINI in a Telecom environment.

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Control Methods

- Configuration can be done over the Internet/LAN via Web page.

Front Panel Interface

- LEDs indicate the following:
 - “Fault” (red) lights up if a sensor goes out of range of a configurable threshold.
 - “Power” (green) lights up when the device is powered/all clear.

Web Interface

- Supports Internet Explorer 6.0 and higher, Firefox 1.5 and higher, Netscape 9, Safari 1.3 and higher for MAC, and Safari 3.0 and higher for PC.
- Configure sensor’s thresholds, alarm methods, formats of alerts, and system data log.
- View/edit sensors’ current values, thresholds and alert statuses.
 - All sensors connected to the ENVIROMUX-MINI can be viewed on one summary page.
 - User configurable settings allow sensors to return to normal status when alert condition clears, without manually acknowledging/dismissing the alert.
- View/edit entries stored in the system data log.
- The log can be downloaded as a tab-delimited plain text file.
- Configure IP information (address, subnet mask, default gateway, DNS, etc.), user administrative settings, and data logging settings.
- Up to four users can access the web page at one time.

WAP Mobile Summary Page

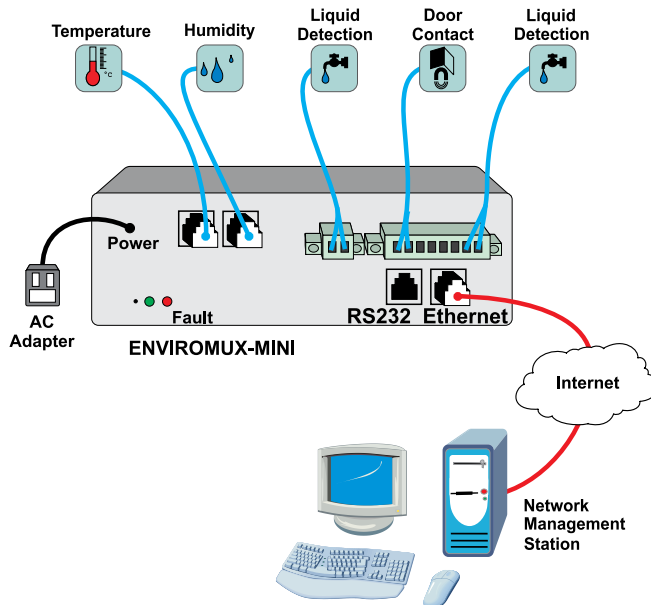
- View summary page on WAP 2.0 compatible devices (smartphones, PDAs, cell phones, etc.)
 - Supports Blackberry Software 4.2 and higher.
 - Supports iPhones using Safari 3.0 and higher.
- Summary page lists all connected sensors' current values and alert statuses.

DIN Rail Mounting Option



ENVIROMUX-MINI-D with optional DIN rail mounting for industrial applications

Configuration and Cable Illustration



Environmental Sensors

Temperature Sensor

- For use with ENVIROMUX-MINI.
- Applications from 32°F to 104°F (0°C to 40°C).
- High resistance to external influences on the cable due to digital output signal.
- Accurate to within $\pm 1.35^\circ\text{F}$ ($\pm 0.75^\circ\text{C}$).
- Re-calibration is not necessary after initial set-up.
- Available lengths: 3/7/10/25 feet.
- Includes mounting hardware.
- Regulatory approvals: CE, RoHS



ENVIROMUX-T-xx

Temperature Sensor, Extended Range

- For use with ENVIROMUX-MINI-IND.
- Applications from 32°F to 167°F (0°C and 75°C).
- High resistance to external influences on the cable due to digital output signal.
- Accurate to within $\pm 2.25^\circ\text{F}$ ($\pm 1.25^\circ\text{C}$).
- Re-calibration is not necessary after initial set-up.
- Available lengths: 3/7/10/25 feet.
- Includes mounting hardware.
- Regulatory approvals: CE, RoHS



ENVIROMUX-T-IND-xx



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Environmental Sensors (continued)

Temperature/Humidity Combination Sensor



ENVIROMUX-TRH-xx

- For use with ENVIROMUX-MINI.
- Applications from 32°F to 104°F (0°C and 40°C) and 20% to 80% relative humidity.
- High resistance to external influences on the cable due to digital output signal.
- Accurate to within $\pm 1.35^{\circ}\text{F}$ ($\pm 0.75^{\circ}\text{C}$) and $\pm 5\%$ relative humidity.
- Re-calibration is not necessary after initial set-up.
- Available lengths: 3/7/10/25 feet.
- Includes mounting hardware.
- Regulatory approvals: CE, RoHS

Liquid Detection Sensor



ENVIROMUX-LDx-y

- For warning of flooding.
- 100% waterproof electronics.
- Detects any conductive liquid.
- Puddle: 0.6" diameter.
- Detects liquid depth $>0.1"$.
- Available water sensor cable (x) lengths: 1/10/50/100/200/400/600/800/1000 feet.
- Available 2-wire cable (y) lengths: 5/10/20/50/100 feet.
- Regulatory approvals: CE, RoHS

Sensor Cables



ENVIROMUX-2W-xx

- 2-wire sensor cable.
- Use to connect dry contact sensors to the ENVIROMUX-MINI.
- Available lengths (ft): 3/6/10/25/50/100
- Regulatory approvals: RoHS, UL

Humidity Sensor



ENVIROMUX-RH-xx

- For use with ENVIROMUX-MINI.
- Applications from 20% to 80% relative humidity at temperatures between 0°C and 40°C.
- High resistance to external influences on the cable due to digital output signal.
- Accurate to within $\pm 5\%$ relative humidity.
- Re-calibration is not necessary after initial set-up.
- Available lengths: 3/7/10/25 feet.
- Includes mounting hardware.
- Regulatory approvals: CE, RoHS

Smoke Detection Sensor



ENVIROMUX-SDS-PA

- For warning of smoke.
- Built-in 135° F (57° C) thermal heat sensor.
- Includes mounting hardware.
- Photoelectric smoke detector.
- Screw terminal.
- Includes 9V/1A power supply.
- Regulatory approvals: UL

Carbon Monoxide Detector



ENVIROMUX-CMD-P

- Continuous air monitoring.
- Pre-set alarm points alert at:
 - 70 ppm after 60 to 240 minutes
 - 150 ppm after 10 to 50 minutes
 - 400 ppm after 4 to 15 minutes
- Flush or surface mount.
- Test functionality of electrochemical CO sensing cell.
- Screw terminal.
- LED indicators for operation status and system test.
- Includes 9V/1A power supply.
- For use with ENVIROMUX-MINI only.
- Regulatory approvals: UL

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Motion/Intrusion Sensors

Door Contact Sensor



ENVIROMUX-M-DCS

- Monitors access with a magnetic bridge sensor, which responds to any magnetic material (no special inserts necessary).
- Can also be used for monitoring side wall and covers.
- Includes mounting hardware.
- For normally closed circuit connection.
- 2-wire interface; screw terminal
- Wide actuating gap, about 1".
- Dimensions WxDxH (in): 0.5x0.5x2 (Switch), 0.5x0.5x2 (Magnet).
- Regulatory approvals: RoHS

Ceiling Mount Infrared Motion Detector



ENVIROMUX-IMD-CMP

- Detects movement across the detection field.
- 360° detection pattern.
- 113° conical detection angle from ceiling.
- 36' diameter protection when mounted 12' high.
- Provides substantial immunity to false alarms caused by environmental disturbances.
- Pulse count or single shot triggering.
- Good RFI protection
- Screw terminal.
- Maximum cable length: 1,000 ft.
- Includes 9V/1A power supply.
- For use with ENVIROMUX-MINI only.
- Regulatory approvals: CE, RoHS

Glass Break Detection Sensor



ENVIROMUX-GBS-P

- Acoustically detects the cracking of glass.
- Adjustable sensitivity.
- Includes mounting hardware.
- Screw terminal.
- Maximum cable length: 1,000 ft.
- Includes 9V/1A power supply.
- For use with ENVIROMUX-MINI only.

Tamper Switch



ENVIROMUX-TDS

- Sends activation signal when tamper switch is released.
- Normally closed contact when depressed.
- Dimensions (in): inner diameter: 0.8, outer diameter: 0.9, height: 2.9
- 2-wire interface.

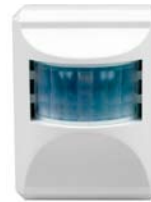
Infrared Motion Detector



ENVIROMUX-IMD-P

- Registers movement in the area covered.
- Condition display via LED.
- Provides immunity from common-mode signals such as the effect of strong hot or cold air currents, variation in ambient temperature, background radiation and acoustic noise.
- 24 dual-element detection zones for long, mid and short range protections.
- Pulse count or single shot triggering.
- Good RFI protection.
- Screw terminal.
- Maximum cable length: 1,000 ft.
- Includes 9V/1A power supply.
- For use with ENVIROMUX-MINI only.
- Regulatory approvals: CE, RoHS

Mini Infrared Motion Detector



ENVIROMUX-IMD-MWP

- Detects movement across the detection field.
- Provides substantial immunity to false alarms caused by environmental disturbances.
- Pulse count or single shot triggering.
- Good RFI protection.
- Dimensions WxDxH (in): 2.2x1.2x2.9
- Screw terminal.
- Maximum cable length: 1,000 ft.
- Includes 9V/1A power supply.
- For use with ENVIROMUX-MINI only.
- Regulatory approvals: CE, RoHS

Emergency / Panic Button



ENVIROMUX-EBS

- Sends activation signal when button is pressed.
- For normally closed or normally open circuit connections.
- 2-wire interface.
- Screw terminal.
- Dimensions WxDxH (in): 0.4x0.9x3
- Regulatory approvals: RoHS



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Alert/Communications Sensors

GSM Modem



ENVIROMUX-GSM-P

- Sends SMS text messages to a pager or cell phone when a sensor goes out of range of a configurable threshold.
- GSM modem with antenna built into system.
- Convenient push-push SIM card holder
 - Mini SIM card supporting SMS messaging required (not included)
- Protocols: AT commands
- Supports one configurable authorized phone number for sending SMS text messages.
- Auto PIN feature, no need to enter SIM card PIN after restart
- Quad band: 850/900/1800/1900 MHz
- SMS: Text mode
- Power: 110 or 220 VAC at 50 or 60 Hz via AC adapter.
- Regulatory Approvals: CE

3G Serial Modem



ENVIROMUX-3G

- Sends SMS text messages to a cell phone when a sensor goes out of range of a configurable threshold.
- Removable antenna.
- Supports third generation (3G) digital cellular standards.
- Convenient push button SIM card holder.
 - Mini SIM card supporting 3G SMS messaging required (not included)
- Protocols: AT commands
- Supports one configurable authorized phone number for sending SMS text messages.
- Tri-band UMTS (HSDPA): 850/1900/2100 MHz
- Quad band EDGE/GPRS/GSM: 850/900/1800/1900 MHz
- Includes 12V/1A power supply.

Power Sensors & Accessories

Power Over Ethernet Adapter



ENVIROMUX-POE

- Enables ENVIROMUX-MINI to be powered over Ethernet connection.
- Eliminate the need to place ethernet-enabled devices near power outlets, giving more freedom of placement.
- Supply Power and Data up to 300 feet using standard Ethernet cabling.
- Outputs Power on an attached DC power cable, and Data on an attached Ethernet cable.
- Ethernet Pin Usage:
 - Data: 1,2,3,6
 - Power: 4,5,7,8
- No tools or software necessary for installation.
- Overload and short circuit protection.
- Standards: 802.3af
- Dimensions WxDxH (in): 3x3.25x1.5
- Maximum power output: 5VDC @ 2.4A.
- Regulatory approvals: RoHS, FCC, CE

AC Voltage Detector



ENVIROMUX-ACVD-515M
ENVIROMUX-ACVD-515
ENVIROMUX-ACVD-C14M
ENVIROMUX-ACVD-C14

- Measurement range: detects voltage from 50 to 250 VAC.
- Measurement indication: Alarm or Normal.
- Sensor type: open/closed contact switch.
- Attached 3-foot power cord.
 - ENVIROMUX-ACVD-515M: Standard US 120V 15A NEMA 5-15 plug (When using with ENVIROMUX-MINI that was purchased before 11/1/2008, use part number ENVIROMUX-ACVD-515)
 - ENVIROMUX-ACVD-C14M: Universal 250V IEC C14 socket (When using with ENVIROMUX-MINI that was purchased before 11/1/2008, use part number ENVIROMUX-ACVD-C14)
- Regulatory approvals: CE, RoHS.

Power Converter



PWR-48V-5V1A

- Use the PWR-48V-5V1A power converter to install the ENVIROMUX-MINI in a Telecom environment.
- Accepts 36~72VDC (48 VDC nominal).
- Accepts positive or negative polarity.
- Outputs +5VDC and can handle 1A load.
- 3-pole detachable screw terminal for connecting 48V input.
- 2.1x5.5mm male DC power jack.
- Dimensions WxDxH (in): 1.8x2.1x1
- Regulatory approvals: RoHS

DC Voltage Detector



ENVIROMUX-DCVD-24V-M

- Measurement range: detects voltage from 24-36 VDC.
 - Contacts remain closed between 26-36 VDC
 - Contacts open when monitored voltage drops below 24 VDC
- Measurement indication: Alarm or Normal.
- Sensor type: open/closed contact switch.
- Includes 6-foot 2-wire cable to connect to the ENVIROMUX-MINI.
- Attached 3-foot power cord with tinned leads on 3 wires.
- For use with ENVIROMUX-MINI purchased on or after 11/1/2007.
- Regulatory approvals: RoHS